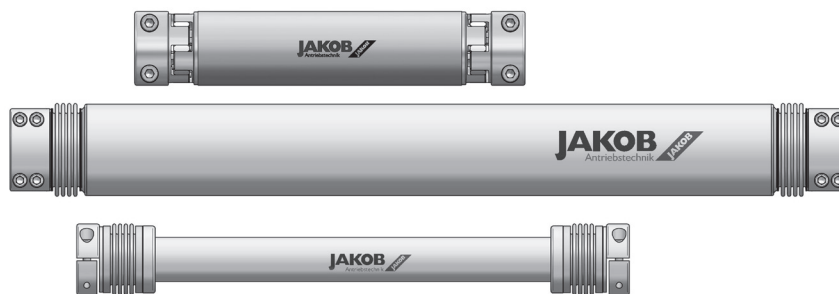


Distance Couplings | General

Definition - Distance Couplings:

This category is comprised of several coupling series which can cover axial distances of up to 6 m of length. The common main feature of all types is an intermediate part, which is variable in length and can precisely fit the required specifications of the customer. In many cases, they can be used as connecting shaft (synchronizing shaft) and can substitute for conventional constructions of connecting shafts with complicated additional intermediate bearings.

Misalignments, especially parallel misalignments, can be compensated to a higher extent. Furthermore, the stainless material and the easy assembly of all series are valuable assets. A secure, frictional connection with easy operation is assured because of the design in split-hub version (series WDS, WDE) or with sliding hub (series EKHZ).



Characteristics – JAKOB Distance Couplings:

- ✓ as connecting shaft without additional intermediate bearing
- ✓ up to 6 m axial distance
- ✓ high operational speed
- ✓ high torsional stiffness
- ✓ backlash-free, precise torque transfer
- ✓ compensation of misalignments
- ✓ very easy to fit split-hub design
- ✓ optional stainless design
- ✓ maintenance free

The customer can choose from three standard series with aluminum intermediate pipe:

Series EKHZ - Elastomer spider

- ✓ length L = 0,2 - 3 m
- ✓ 7 sizes up to 1600 Nm
- ✓ T max = 100°C
- ✓ cost-effective type for medium speeds

Series WDS - Metal bellows

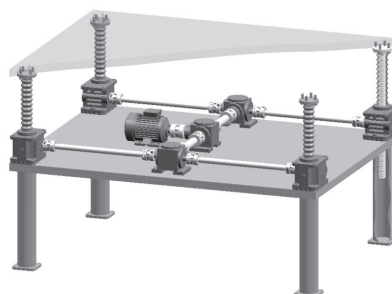
- ✓ length L = 0,2 - 6 m
- ✓ 7 sizes up to 1600 Nm
- ✓ T max = 200°C
- ✓ integrated gimbal / cardan support
- ✓ big pipe diameter for max. speeds
- ✓ high torsional stiffness

Series WDE - Metal bellows

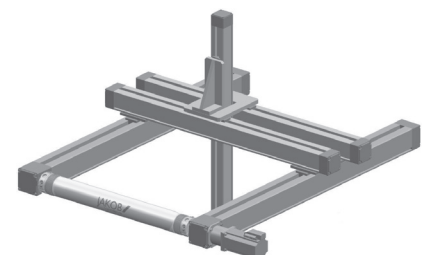
- ✓ length L = 0,2 - 3 m
- ✓ 5 sizes up to 500 Nm
- ✓ T max = 100°C
- ✓ integrated gimbal / cardan support
- ✓ cost-effective type with reduced operating parameters

Series WD-VA - Metal bellows

- ✓ length L = 0,2 - 3 m
- ✓ 7 sizes up to 1200 Nm
- ✓ T max = 350°C
- ✓ stainless steel version



EKHZ - coupling for lifting table drive



WDS - coupling for multi-axis linear module

Distance Couplings I Installation

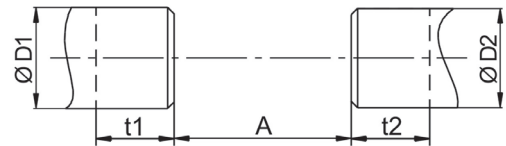
Installation:

The split-hub design allows for easy assembly. Further simplification during installation is provided because one half of the split hub is screwed onto the pipe. This allows resting the coupling on the two shaft ends. The second half of the split-hub can then be mounted to the coupling by screwing it on from below with the specified tightening torque. This feature makes a “one man assembly” possible even with extremely long couplings. During maintenance, EKZ/ WDS/WDE couplings can be exchanged without disassembling the drive or output units.

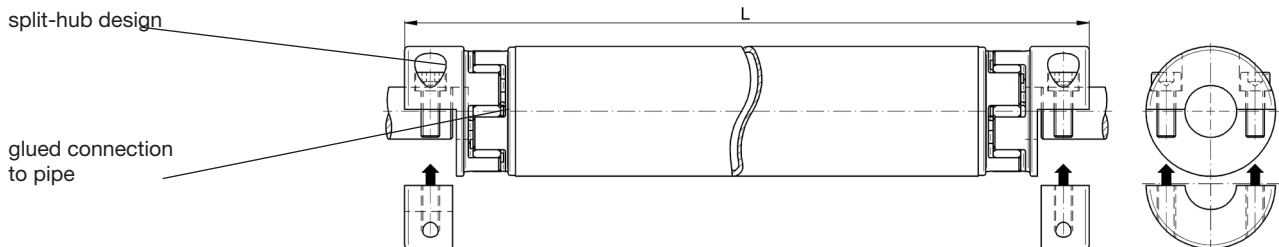
Formula for length determination:

$$L = A + t_1 + t_2 \quad [\text{mm}]$$

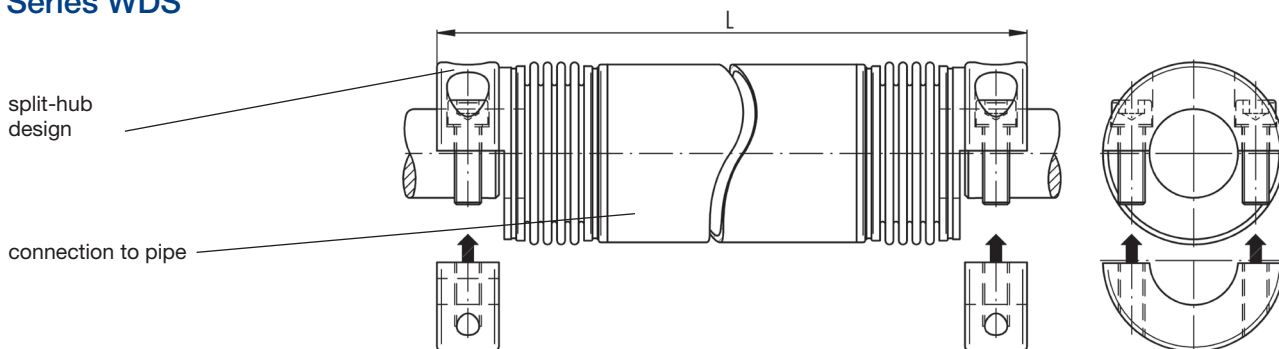
A = shaft separation ± 1
 t = plug in depth ± 1
 (see data sheets)



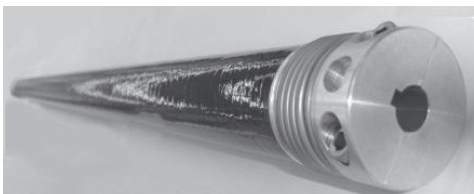
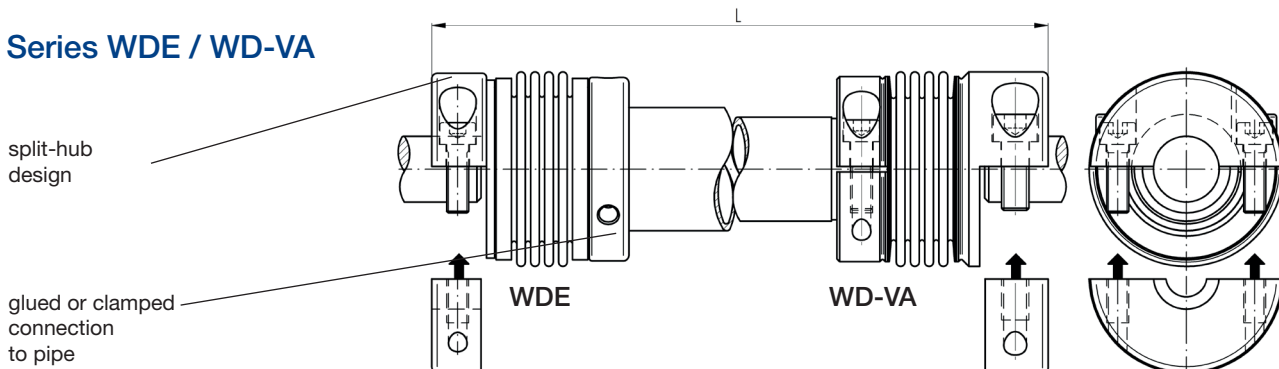
Series EKHZ



Series WDS



Series WDE / WD-VA



Note: The intermediate pipe can be delivered in different materials and section thicknesses, as well as in straightened and balanced quality for high speeds. At high speeds and concurrent long pipe length, a customized and optimized intermediate pipe made from CFC will be used (see picture to the left).